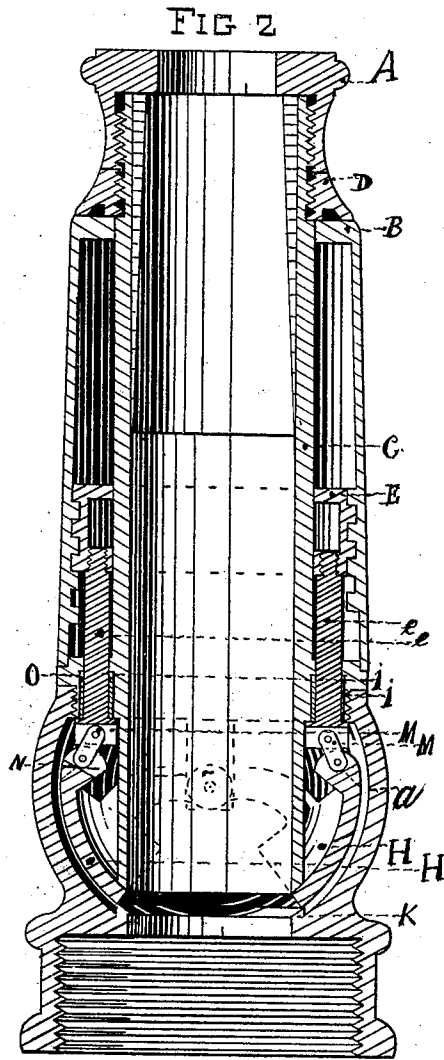
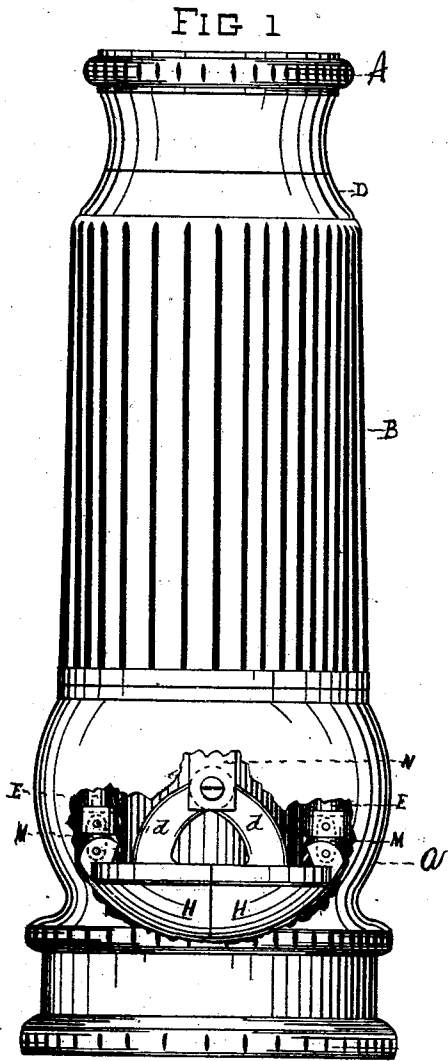


E. V. BOWEN.  
Hose-Nozzles.

No. 149,430.

Patented April 7, 1874.



WITNESSES

*Henry Martin*  
*Charles Seaman*

INVENTOR

*Edward V. Bowen.*

# UNITED STATES PATENT OFFICE.

EDWARD V. BOWEN, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO WILLIAM A. CASWELL AND EDWIN M. WALDRON, OF SAME PLACE.

## IMPROVEMENT IN HOSE-NOZZLES.

Specification forming part of Letters Patent No. 149,430, dated April 7, 1874; application filed February 6, 1874.

*To all whom it may concern:*

Be it known that I, EDWARD V. BOWEN, of the city and county of Providence and State of Rhode Island, have invented a new and useful Controlling-Nozzle; and I do hereby declare the following specification, given in connection with the drawing furnished, to be a true and exact description thereof.

Figure 1 represents the outward form of one of my nozzles, showing a portion of the valve when closed. Fig. 2 represents the same in sections, the parts being lettered alike in both figures, and correspond with those given in the following specification.

Reference being had to Fig. 2, *a* represents the globe or case of the nozzle. *C* represents the tube having a flange near one end on which is cut a thread to connect the same to the globe, and it also has two lugs, *N*, into which the valve is hung. *B* is a conical sleeve made to fit close around the tube at the top, and having a left-hand screw-thread upon its inner surface. *D* is a ring screwed upon the outer surface of tube *C* down against a shoulder, so as not to bind the sleeve *B*. *A* is the tip screwed down over and against the extreme end of tube *C*. The object of the ring *D* is to enable firemen or others to substitute other-sized tips without displacing the working-parts. *E* is an encompassing-ring, chambered on the inside, and having a left-hand thread outside. It meshes into the one cut inside conical sleeve *B*, and is carried up or down as the conical sleeve is rotated. The left-hand thread facilitates the opening and closing of the valve, it being more natural to turn it to the right to close it, and to the left to open the same. The conical-shaped sleeve improves the outward form of the nozzle, and enables those with small hands to clasp and revolve it as easily as those with large hands. *ee* are rods having a collar at one end and a screw-thread at the other. These rods are passed up through holes in flange *O* and screwed into the ring *E*. *H H* is a circular or globe-shaped valve opening in the center, and having four arms, *d d*, on top edge, and on a circle with tube *C*. These arms are halved together and fastened into

lugs *N* by means of a screw, which allows the valve to open and close on a circle. *M M* are links which form the connection between the valve *H H* and the rods *ee*, both being slotted to receive them. Letters *ii* represent packing held in place by means of a bushing screwed up from the under side of flange *O*, which makes the same water-tight. *K* is a projection from the inside and bottom of the globe, around which may be placed leather or other suitable packing for the valve to rest on when closed, making the same water-tight.

It will be observed, therefore, that, the bottom of the globe being packed with leather and the edges of the valve beaded, all possibility of leaking is avoided.

I am aware that a nozzle has been invented having two circular-shaped wings or ears hung at or near the extreme outside edges, and closed by sliding down a tube within a tube by means of a straight sleeve provided with a right-hand thread meshing into a similar one on the outside of the outer tube, so that the sleeve and inner tube rise and fall together. The closing of this valve is often attended with difficulty, as it has to be carried down against the pressure, which is oftentimes very great. But I am not aware that a controlling-nozzle having a circular or globe-shaped valve fastened together in the form of a hinge by means of holding together four arms and fastening them into lugs on the side of a tube, and opening and closing the same by means of a conical sleeve having a left-hand thread upon its inner surface and meshing into a similar one cut on the outer surface of a slide-ring, and the slide-ring connected to the valves with arms and links, as shown in drawings, has ever been invented before.

Having described my invention, I claim as new and wish to secure by Letters Patent—

1. In combination with a nozzle and sectional semi-globular valve, the holding device consisting of arms *d d*, halved together and fastened to tube *C*, and operated as herein described, substantially as and for the purpose specified.

2. In combination with a nozzle, the device

for opening and closing the valve, consisting of rods *e e* and links M M, and the device for packing the same, substantially as and for the purpose specified.

3. In combination with the valve H H, links M M, and rods *e e*, the encompassing-ring E, provided with a left-hand screw-thread upon its exterior and a chamber upon its interior

surface, substantially as and for the purpose described.

4. The ring projection K, as specified.

EDWARD V. BOWEN.

Witnesses:

LOUIS L. NORTHUP,  
HENRY A. CARBER.